



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/895,264	07/02/2001	Kiyoshi Kamitani	Q64664	7751

7590 04/14/2004

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
Suite 800
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037-3213

EXAMINER

FLETCHER III, WILLIAM P

ART UNIT	PAPER NUMBER
----------	--------------

1762

DATE MAILED: 04/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/895,264	Applicant(s) KAMITANI, KIYOSHI	
	Examiner William P. Fletcher III	Art Unit 1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5,6,9,12-14,17-22,24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-14,17-22,24 and 25 is/are allowed.
- 6) ☒ Claim(s) 1-3,5,6 and 9 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see the response, filed 8/18/2003, with respect to the rejections under 35 U.S.C. § 112, 2nd Para. and the rejections of claims 12-14, 17-22, 24, and 25 under 35 U.S.C. § 103(a), set-forth in the Office action mailed 5/19/2003, have been fully considered and are persuasive. These rejections have been withdrawn.

2. Applicant's arguments, see the response, filed 8/18/2003, with respect to the rejection(s) of claim(s) 1-3, 5, 6, and 9 under 35 U.S.C. § 103(a), set-forth in the Office action mailed 5/19/2003, have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Yapel et al. (US 5,906,862 A) below.

Claim Objections

3. Claim 12 is objected to because of the following informalities: "the supported" should, apparently, read "the supports." Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1 and 9 is rejected under 35 U.S.C. 102(b) as being anticipated by Yapel et al. (US 5,906,862 A).**

Art Unit: 1762

With respect to claim 1, this reference teaches a method in which a conveyed support is coated with a photosensitive coating solution containing an organic solvent, the solution forming a coated layer on the substrate (abstract; 6:31-47; and 8:23-27). The coated support is dried and hardened by being conveyed through several heated gas (i.e., non-contact) drying means (6:49-8:21; 9:40-10:8; and 13:49-67). Each consecutive heating means is situated downstream of the one immediately before it (see Fig. 13). The coating is dry-to-touch (having a viscosity of 10^8 - 10^{10} poise) before exiting the penultimate heating means (8:40-41; 9:49-51; and 13:49-67). This reference explicitly states that the temperature of the drying gas may be progressively increased as the coated support is conveyed through the drying means (13:57-67). It is the examiner's position that this teaching reads on "changing a condition of heating of the second heating means while the support is being conveyed." Further, the examiner notes that the dried, coated substrate is eventually removed from the ultimate drying means. At such a time, the substrate is being conveyed but the second heating means is no longer heating the coated substrate: a condition of heating has changed.

With respect to claim 9, the photosensitive layer is heated by the all of the heating means (including the ultimate, or second, heating means) and the photosensitive layer is dry upon exiting the second heating means. Consequently, it is the examiner's position that the temperature of the coating upon exiting the second heating means inherently is predetermined to be a temperature at which the particular coating is dry. Thus, Yapel satisfies the limitations of this claim as well.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 2, 3, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yapel et al. (US 5,906,862 A).**

The disclosure of Yapel is detailed above.

With respect to claim 2, this reference does not explicitly state that the temperature of the penultimate, or first, heating means heats the photosensitive coated layer to 90°C or more. The temperature to which a coated photosensitive solution is heated to dry it is a result effective variable effecting the rate of drying and, thereby, the overall processing time. Consequently, absent a showing of unexpected results demonstrating the criticality of the claimed temperature of the first heating means, it would have been obvious to one of ordinary skill in the art to modify the method of Yapel to optimize this result-effective variable by routine experimentation.

With respect to claim 3, Yapel teaches that the coating material is dry-to-touch, meaning that it has a viscosity of 10^8 - 10^{10} poise (see above). Yapel does not explicitly teach the amount of organic solvent remaining in the coating layer after leaving the penultimate, or first, drying means. The amount of remaining solvent is a result-effective variable. If the amount of organic solvent remaining is too great, the coating material will not be dry-to-touch. Absent a showing of unexpected results demonstrating the criticality of the claimed amount of residual solvent, it would have been obvious to one of ordinary skill in the art to modify the method of Yapel to

Art Unit: 1762

determine the amount of solvent remaining in the coating layer after the hot air drying process by routine experimentation, thereby limiting the amount of solvent remaining so that the coating layer is dry-to-touch.

With respect to claims 5 and 6, it is the examiner's position that both radiation and induction heating systems are well-known means of heating air/gas for drying coatings.

Allowable Subject Matter

8. Claims 12-14, 17-22, 24, and 25 are allowed.
9. The following is a statement of reasons for the indication of allowable subject matter: Applicant amended claim 12 to recite that the supports, having different thicknesses or widths, are connected. The prior art neither teaches nor suggests this feature.
10. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements (specifically, the objection to claim 12 above) or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Fletcher III whose telephone number is (571) 272-1419. The examiner can normally be reached on Monday through Friday, 9 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P. Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1762

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WPF 4/6/2004

William P. Fletcher III
Examiner
Art Unit 1762



SHRIVE P. BECK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700